

## SOME NEW AND LITTLE-KNOWN NEOTROPICAL AND SUBTROPICAL STRATIOMYIDAE.

BY MAURICE T. JAMES, Colorado State College, Ft. Collins, Colo.

For some time I have had in my possession specimens representing two undescribed genera of Clitellariinae, but have refrained from describing them, with the hope that the specimens in question might be referred to some Old World genus. Since that seems impossible, I am now following the usually rather undesirable course of erecting two new monotypic genera in this subfamily, and of making a monotypic segregate of the Stratiomyine *Cyphomyia*. These three forms are so distinct that such a step seems warranted.

### STRATIOMYINAE.

#### *Cyphomyia varipes* Gerst.

The following is a description of the male.

♂. Quite similar to the female except in the structure of the head and, of course, sexually. The eyes are contiguous for a third or more of the distance between the antennae and the ocelli; the face, frontal, and vertical triangles are yellow, the ocellar triangle and occiput, except for a brief continuation of the vertical area, black; the white silvery pile covers almost all of the face and extends onto and covers practically all of the occiput, but is sparser and more appressed above; it is longest on the cheeks. The pile of the body is slightly longer in places and more plentiful.

1 male, Aserri, Costa Rica, 600 m., IV 1906 (P. Biolley) (Colorado State College Col.). Also 2 females, same data, 3 females, Barro Colorado, Canal Zone, VII 24, 25, 27, 1924 (N. Banks) and 1 female, Chiriquí (C. W. Johnson).

In the male described above, as well as in the females from the same locality and from Chiriquí, certain pleural areas and the venter may appear somewhat reddish in certain lights, though normally metallic blue.

#### *Cyphomyia banksi*, new species.

In superficial appearance, this species seems identical with *varipes*, but under the microscope the following characters appear.

(1) The eyes are regularly and rather densely covered with short, white pile. (2) the eyes are smaller and the occipital

orbits correspondingly broader; the occipital orbits, at their broadest point, are about two-fifths the width of the eyes (one-fourth in *varipes*). (3) The front is rounded (flattened in *varipes*) and not longitudinally sulcate. (4) The posterior rim of the occipital orbits is not sharp, but rounded; similarly, the division between the occipital orbits and the vertex is not marked by a furrow, but only weakly defined. (5) The terminal (10th) antennal segment is about as long as the preceding one (one-half as long in *varipes*). (6) There is a definite tuft of black pile on the face just below the antennae. (7) The thoracic dorsum and scutellum have, in addition to the appressed yellow pile, a considerable quantity of erect, black pile, longest on the scutellum; this also extends to the abdomen, where it is mixed with pale pile. (8) The scutellar spines are narrowly and abruptly yellow at the tip (in *varipes*, largely yellow or reddish, that color gradually merging into the blue). (9) The first two segments of each tarsus are whitish.

As in *varipes*, the body is metallic blue, the head wholly yellow, the antennae black, the femora yellow with an abrupt change to black on about the apical third, the tibiae black, the apical tarsal segments (but to a different extent) black, and the wings infumated. Length, 10-12 mm.

Holotype: female, Barro Colorado, C. Z., July 17, 1924 (N. Banks). Paratopotypes: 18 females, same date; 1 female, June 24, 1924.

*Cyphomyia willistoni* (Enderlein) (*C. lasiophthalma* Will. 1900 nec. Will. 1896), with somewhat similarly marked femora and pilose eyes, is much different; it has a black head and body, the antennae are yellow basally, the wings hyaline with a brownish band across the middle, the abdomen is marked with areas of appressed white hair, etc. The coloration of the femora will readily distinguish these three species from the other described ones.

*Gyneuryptaria* Enderlein, which was distinguished from *Cyphomyia* merely on the basis of the hairy eyes, is not valid, since closely related species may differ whereas more distant ones will agree in this respect; moreover, the eyes may be pilose in the male and not so in the female. The same thing will apply to such genera as *Psellidotus*, *Hirtea*, and *Acrodesmia*, based on *Odontomyia*, *Stratiomys*, and *Hermetia*, respectively, with hairy eyes. Eye pilosity seems to be a very unsafe character on which to base generic differences in the *Stratiomyidae*.

**Dicyphoma**, new genus.

Related to *Cyphomyia*, but readily distinguished by the short scutellar spines, which are barely one-fourth as long as the scutellum, are set toward the outer angles of the trapezoidal scutellum, and arise from below, being directed upward and outward. The first antennal segment is twice as long as the second; the flagellum eight-segmented, the segments gradually decreasing in length, the terminal one set slightly at an angle to the remainder: the eyes are pilose, contiguous in the male, separated in the female, the front of the female has two transverse calluses, almost contiguous medially, a short distance above the antennae, and a small tubercle between each of these and the ocelli. The general appearance is that of *Adoxomyia* rather than of *Cyphomyia*.

Type, *Dicyphoma schaefferi* (Coq.) (*Cyphomyia schaefferi* Coquillett).

*Dicyphoma schaefferi* (Coq.).

The male has not been previously described.

♂. Black, varied with yellow as in the female, but the frontal triangle, which is very small, has only a suggestion of yellow; eyes densely long black pilose; face rather strongly rounded, with abundant long black pile in addition to the appressed tomentum; thorax with a considerable amount of pile, varied black and pale yellow, on the dorsum, pleura, and scutellum; and the abdomen yellow pilose laterally at the base, this pile being in addition to the usual pollen. Otherwise, except sexually, as in the female.

Male, Donna, Texas, April 1, 1934 (J. W. Monk). A female, Donna, Texas, April 11, 1934 (Monk) agrees perfectly with Coquillett's description. A character not mentioned by Coquillett is the presence of a bare, polished, streak on each pleuron running from the base of the anterior femora to the notopleural suture in such a way that the femur might, when at rest, be appressed against it.

## CHRYSOCHLORINAE.

**Chrysochlora flavescens**, n. sp.

Runs in Curran's key (Amer. Mus. Nov. 339,2) to *incompleta* Curran, but the pile of the body is entirely pale, the thoracic stripes are not black, the abdomen is uniform in color dorsally, etc.

♂. Entirely yellow, except as follows: Ocellar triangle and occiput, except the median fifth, black; thorax with three broad vittae on the dorsum, a spot on each mesopleuron, and the pectus, ochraceous; basal half of scutellum ochraceous; abdomen, except the basal ventral segments, ochraceous. Pile entirely yellow; that of the head rather long and dense; that of the dorsum almost golden. Wings yellow-fumose, the costal area definitely darker than the remainder, but evenly infumated. Length, 10-16 mm.

Holotype: male, Yucatán (G. F. Gaumer). In the Snow Entomological Collection, University of Kansas.

Paratypes: 14 specimens, apparently all males, same date.

In this genus it is often impossible to distinguish the sexes when the genitalia are missing, as they are in three of the paratypes.

#### CLITELLARIINAE.

#### *Dieuryneura*, new genus.

Evidently related to *Euryneura*, but differing in so many respects that there is no question whatsoever as to the generic distinctness of the two.

Head slightly broader than the thorax; the occipital orbits in the female well defined but rather narrow above, broadening into the cheeks below, in the male wanting; vertex and upper part of front, in the female, of approximately equal width, almost as wide as the length of the antennae, the front below and the face widening out, considerably; eyes of male broadly contiguous, distinctly divided into areas of larger and smaller facets. Eyes bare. Antennae inserted definitely below the middle of the eyes, in the female the point of insertion almost on a level with the lower ocular margin; eight-segmented, the basal one slightly longer than broad, the second a little shorter than the first, the remaining ones consolidated into a flagellum, of which the first three annuli are robust and bear sensory pits, the fourth one is tapering, the fifth very short, ring-like, the sixth style like, set at an angle with the remainder. Female above the antennae with two large caluses, which are almost contiguous but separated by a distinct furrow; in the male, these occupy the whole of the frontal triangle. Proboscis short, with fleshy, ciliated labella, and set in a broad, flattened, triangular area which is distinctly margined. Scutellum large, triangular, with the two spines set approximate to each other at the apex; the spines very short, directed straight back, but slightly upcurved at the apex.

Venation similar to that of *Clitellaria* (*Ephippium*) and *Lasiopa villosa*, but vein r-m is almost punctate, and  $R_{2+3}$  is situated beyond the apex of the discal cell; the discal cell is rather large, subtriangular, the union of  $Cu_1$  with the discal cell is very short, and the three branches of the media are distinct to the wing margin;  $M_2$ ,  $M_3$ , and  $Cu_1$  from the discal cell are almost straight, except at their apices. Abdomen flat; excluding genitalia, about as long and as broad as the thorax.

Genotype, *Dieuryneura callosa*, new species.

**Dieuryneura callosa**, new species.

♂. Head black, except for an indistinct pair of yellow spots below the antennae; this color, however, is variable, as the black may be brownish-black, and the antennae, palpi, proboscis, and oral area may be partly or wholly yellow. Calluses bare, shining; vertical triangle, occiput, face, and cheeks clothed with moderate dense, short, appressed white pile, with some erect white hair on the cheeks and lower part of the occiput. Thorax, including scutellum, black, except for the shining metascutellum uniformly clothed with appressed pile similar to that of the head; a little erect pile on the upper part of the pleura, especially anteriorly; the humeri are reddish, and there may be some brownish-black on the postalar calluses, pleura, and scutellar spines. Abdominal pile short and inconspicuous, except for silvery lateral tufts at the posterior corners of segments two to four inclusively; the background obscured by silvery pollinose triangles medially on segments one to five, all connected along the median line, those on segments one and five large. Legs variably brown to black, but the basitarsi always distinctly paler yellow. Basitarsi long, the first and third definitely longer than the remaining tarsal segments: the posterior basitarsi about two-thirds as long as their tibiae. Wings grayish hyaline, darkest at apex and along the posterior margin; stigma brown, large; veins strong, brown. Halteres yellow, their knobs white. Length, 10 mm.

♀. As in the male, but the front is clothed with rather dense, short, white pile, the yellow spots below the antennae are more evident, the basitarsi are pale only basally, and the lateral pilose spots of the abdomen are less evident.

Holotype: male, Baboquivari Mts., Ariz. (F. H. Snow), in the Snow Entomological Collection.

Allotype: Tucson, Ariz. (Snow), in the Snow Entomological Collection.

Paratypes. 2 females, Tonto Nat. Monument, Ariz., July 26, 1932 (R. H. Painter); male, female, Santa Rita Mts., Ariz. (D. K. Duncan); male, Globe, Ariz. (Duncan); male, Palmdale, Calif., July 6, 1933 (R. H. Beamer).

**Platopsomyia**, new genus.

♂. Head slightly broader than the anterior margin of the thorax, definitely flattened dorsoventrally; ocellar triangle tuberculate; eyes subtriangular in lateral profile, broadly contiguous, definitely divided into areas of larger and smaller facets. Antennae inserted near the lower margin of the eyes, about as long as the head, eight-segmented; the first and second segments short, about as long as wide; the remaining segments consolidated into an eight-annulated flagellum, the terminal three annuli of which form a fairly well defined style, which, by virtue of the elongation of the terminal annulus, is longer than the remainder of the flagellum; the terminal annulus as long as the preceding four, rather robust, tapering gradually to a point, with a small terminal hair. Scutellum unspined. Abdomen somewhat longer than thorax and slightly broader, flattened. Radial sector angularly bent at the cross-vein; r-m very short;  $R_4$  wanting;  $R_{2+3}$  almost as long as the width of the discal cell; the media with three strong branches, the anterior two reaching the margin, the third one abruptly terminating a short distance from the margin; the union of the discal cell with the fifth posterior about equal to that with the fourth posterior cell; the vein separating the basal cells, except near its apex, evanescent.

Holotype, *Platopsomyia flavida*, new species.

**Platopsomyia flavida**, new species.

♂. Eyes reddish-yellow; the narrow vertical triangle, ocellar triangle, occiput, proboscis, and palpi bright yellow; face and frontal triangle a dull yellow; antennae black, the basal three annuli of the flagellum yellow on the inner side. Face with rather thick, short, white hair. Thorax, including the scutellum and the coxae, trochanters, and femora, reddish-yellow; anterior tibiae and tarsi blackish, locally merging into yellow; the middle tibiae and tarsi testaceous yellow, except for the apices of the tibiae and the three apical tarsal segments, which are black; posterior tibiae brownish-yellow, the first two tarsal segments pale yellow, the remaining ones black.

Pile of thorax and legs yellow, rather scarce, fairly dense on the pleura and pectus; that of the tarsi thick, stubby, yellow to golden; a little black pile on the hind tibiae. Abdomen dull black, somewhat reddish-yellow at the base laterally, especially on the venter; the yellow regions are not clearly defined, and the black in places shows a brownish tinge. Pile yellow, longest on the dorsum, where it is intermixed with a considerable amount of black pile. Wings dusky-hyaline, the apex beyond the stigma rather strongly infumated near the costal region; stigma and veins, except for the evanescent basal part of the media, brown. Length, 7 mm.

Holotype: male, Stgo. de las Vegas, Prov. Habana, Cuba, June 28, 1931 (A. Otero). E. E. A. Cuba. Ento. No. 10415.

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## PHOTOGRAPHING INSECTS

Insects may be photographed in their natural environment or as prepared specimens. For the former I have found nothing better than a camera with a fast lens and a focal plane shutter, such as my own Graflex, which has the advantage that the objects may be focused up to the time the shutter is released. Although objects will not focus clearly at a distance greater than two feet from the camera, so that the resulting image is rather small, sufficient contrast may be obtained for enlargement. Properly preserved insects or their parts may be, with a little artistry, arranged to produce rather lifelike pictures. For these a 4/5 Tessar lens with a focus of 72 mm. is used with artificial light and special attention given to background. Sometimes special preparation of the specimen is required. For instance, to photograph the divided eyes of *Gyrinus* it was necessary to first decolorize the eyes and then place the specimen in a mixture of alcohol and water with the head directed toward the camera. Pictures have been made from slides by substituting a compound microscope for the camera lens and using transmitted light. Chitinous parts photograph especially well, perhaps because they contrast well with a blue-green light filter. These pictures serve a practical purpose in that from them lantern slides are made to assist in teaching.—CYRIL E. ABBOTT, Chicago, Ill.